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Question Paper Code	12523
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B.E. / B.Tech - DEGREE EXAMINATIONS, NOV / DEC 2023
Fourth Semester
Electronics and Communication Engineering
20BSCY201 - ENVIRONMENTAL SCIENCE AND ENGINEERING
(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
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| 1. What is meant by Environment and list its components? | <i>2,K2,CO1</i> |
| 2. What is Bio-magnification? | <i>2,K2,CO1</i> |
| 3. What is meant by Eutrophication? | <i>2,K2,CO2</i> |
| 4. What is meant by Reynold's number? | <i>2,K2,CO2</i> |
| 5. Define Life cycle assessment. | <i>2,K1,CO3</i> |
| 6. List out the methods in Risk Assessment. | <i>2,K1,CO3</i> |
| 7. Differentiate Temporary and Permanent Hardness. | <i>2,K2,CO4</i> |
| 8. List out the significance of Dissolved oxygen. | <i>2,K1,CO4</i> |
| 9. How does the Donora smog affect that area? | <i>2,K3,CO5</i> |
| 10. Cape Town has experienced water shortages. Why? | <i>2,K2,CO5</i> |

PART - B (5 × 16 = 80 Marks)

Answer ANY FIVE Questions

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| 11. Discuss Energy flow in an ecosystem. | <i>16,K2,CO1</i> |
| 12. Explain the 12 principles of Green Chemistry. | <i>16,K2,CO1</i> |
| 13. Explain the following - Carbon, Oxygen, Sulfur cycle. | <i>16,K2,CO2</i> |
| 14. Explain the process of LCA. | <i>16,K3,CO3</i> |
| 15. Find Cl ₂ demand, if Cl ₂ dose of 0.6 mg/L is added to have Cl ₂ residual of 0.2 mg/L. Find the dose of bleaching powder required, if it contains only 30% of Cl ₂ . Also find monthly bleaching powder requirements in kg to treat 10 MLD of water. | <i>16,K3,CO4</i> |
| 16. Explain the Biological Methods of waste treatment. | <i>16,K2,CO4</i> |
| 17. Explain the causes, consequences and control measures of Air Pollution. | <i>16,K2,CO5</i> |
| 18. Discuss the various causes, effects and control measures of Global warming. | <i>16,K2,CO5</i> |